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DEVELOPMENT OF A SCALE TO MEASURE INTERESTS IN AGRICULTURAL OCCUPATIONS.

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TO AID IN THE GUIDANCE OF YOUNG PEOPLE INTERESTED IN SPECIALIZING IN OFF-FARM AGRICULTURAL OCCUPATIONS, A STUDY WAS CONDUCTED TO IDENTIFY ITEMS THAT WOULD REVEAL INTEREST PATTERNS OF SUCCESSFULLY EMPLOYED ADULTS IN THE FIVE AGRICULTURAL OCCUPATION FIELDS OF PRODUCTION AGRICULTURE, ORNAMENTAL HORTICULTURE, AGRICULTURAL BUSINESS, AGRICULTURAL MECHANIZATION, AND CONSERVATION. AN AGRICULTURAL OCCUPATIONS INTEREST SCALE WAS DEVELOPED ON THE BASIS OF DATA COLLECTED FROM 767 INTERVIEWS. IT WAS CONCLUDED THAT AGRICULTURAL INTERESTS WERE PATTERNED AND THAT DISCRIMINATION AMONG AGRICULTURAL FIELDS WAS POSSIBLE. RECOMMENDATIONS WERE MADE FOR FURTHER STUDY OF BOTH THE AGRICULTURAL BUSINESS AND CONSERVATION FIELDS AND FOR USE OF THE INSTRUMENT FOR GUIDANCE. (GD)

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TABLE OF CONTENTS

		Page
INTRODUCTION		1
	Review of Selected Literature	1
	Objectives	3
METHOD		4
RESULTS		7
	Developing the Production Agriculture Scale	7
	Developing the Ornamental Horticulture Scale	8
	Development of the Agricultural Business Scale	9
	Development of the Agricultural Mechanization Scale	9
	Developing the Conservation Scale	10
	The Agricultural Occupations Interest Scale	11
DISCUSSION		21
CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS		24
	Conclusions	24
	Implications	25
	Recommendations	25
SUMMARY		26
REFERENCES		27
GLOSSARY		28
APPENDIX A	RESEARCH INSTRUMENTS AGRICULTURAL INTEREST INFORMATION SHEET	A-1
APPENDIX B	INTERVIEWER'S MANUAL	B-1
APPENDIX C	DISTRIBUTION OF SCHEDULES OBTAINED FROM INDIVIDUALS IN AGRICULTURAL OCCUPATIONS	C-1
APPENDIX D	CORRELATIONS FOR WOMENS ANSWERS TO FINAL ITEMS AND SUGGESTED KEY VALUES FOR ORNAMENTAL HORTICULTURE AND PRODUCTION AGRICULTURE	D-1
APPENDIX E	CORRELATIONS OF FINAL ITEMS TO HIGH SCORES ON EACH KEY	E-1
APPENDIX F	PERCENTILE RANK OF SCORES ON THE AGRICULTURAL OCCUPATIONS INTEREST SCALE FOR MEN BASED ON FINAL KEYS	F-1

INTRODUCTION

With the passage of Public Law 88-210 a change in the agricultural training programs was made possible. From training for those entering or preparing to enter the work of the farm the change was to training people in any occupation requiring agricultural skills. Guidance in vocational agriculture becomes of additional significance. At the present time only limited means exist for measuring interest in the following agricultural occupations fields: agricultural production and management, horticulture, agricultural business, agricultural mechanization, and conservation.

In order to help young men and women determine their best field for specialization in off-farm agricultural occupations, additional guidance helps would be useful. An agricultural interest scale would help fill this need.

The development of a validated interest scale is envisioned as a three-step procedure as follows: the first step would consist of developing interest items and testing them with successfully employed adults to identify their patterns of interests that discriminate between occupational groups. The need of a second step would be determined by the success obtained in the first. This step would involve testing additional items for areas insufficiently discriminated with the first group. The third step in developing a scale would be the administration of the tentative scale to a large number of high school students and developing norms on the basis of the results.

To determine the validity of the scale a number of students should be followed up for a period of several years to determine the jobs they entered and the jobs they continued as well as their job satisfaction or adjustment.

The study was concerned with the first step in the procedure described, that of developing the list of items for the proposed scale that could be used for further study leading to refinement and validation.

Review of Selected Literature

Many of our current interest inventories use only a limited number of agricultural items and attempt to evaluate agricultural interests. The Curtis Interest Scale (5) makes use of only five agricultural items. The Brainard (3) and Cleeton (4) use less than 30 items each as a basis for judging agricultural interests. Some of the items in use in inventories are a generation out of date, for example: the Brainard (3) uses such items as: "How do you like to -- milk cows: strain, separate, and care for milk, make cheese, etc."

Noakes (2) prepared an instrument to indicate content in five agricultural subjects. These forms were used to inform students of course content and to help them select subjects to pursue in high school. In a study of two New York Counties, 38 percent of the students in grades 8, 9, and 10 desired course work in the five specialized areas of agricultural mechanics, agricultural business, conservation, ornamental horticulture and agricultural production and management.

Walker, Stevens and Hoover (12) developed an interest inventory for prospective vocational agriculture students. The purpose of their inventory was to aid guidance counselors and vocational agriculture teachers in their guidance roles with eighth grade boys. The instrument was successful in predicting those students who would later be successful in vocational agriculture classes.

Johnson (7) made a study of interests of home economists in order to develop an interest inventory for home economics occupations. She developed an instrument and ten scales for different occupations in the home economics field. Chi-square was used in the determination of the differentiating ability of the investigated items. The contribution of each item to chi-square was used to determine the rank order or value of each item in the completed inventory.

Strong (10) used a format of like, indifferent or dislike in his vocational interest blank. Scores for scale values were determined by the probability the answer pattern was other than by chance. The less the probability the answer was a chance occurrence, the greater the scale value for the item.

Ginzberg and others (6) suggested that vocational choice was largely an irreversible process occurring through three life stages: first, the fantasy of wishing to be an adult that occurs until about age 11; second, the tentative choice stage lasting to about age 17; and finally, the realistic stage of choice. Their theory of vocational choice development suggested that high school youth develop patterns of interests that remain relatively stable through life.

Strong (11) submitted evidence supporting this stability theory when he reported correlations of .82 for interests of men at age 15 and 25 years and of .73 between the ages of 15 and 55. The irreversibility of vocational choice emphasized the need for wise counsel and guidance for youth in making their very important preliminary vocational training decisions.

Three basic patterns have been used in the construction of interest inventories as illustrated by: first, factor analysis in the Kuder (8); second, construction of a universe of items and selection at random as in the Occupational Interest Inventory (9); and third, the comparison

of answer percentages between the answers of the occupational group and other groups as used by Strong (10) and followed by Johnson (7).

Objectives

The basic objectives of the study were:

1. To develop interest items designed to discriminate between the different occupational fields of agricultural production and management, horticulture, agricultural business, agricultural mechanization, and conservation.

2. To test these interest items on successful people in each of the occupational fields to identify the items that most successfully discriminate between these occupational fields.

3. To develop a list of the most successful 75-100 items and to develop a scoring key for each occupational field.

METHOD

The method used in the study consisted of several basic steps which are described here.

In the first step of the study, particular emphasis was placed on developing a schedule of interest items representing typical activities or concepts of the jobs in the fields studied. Attention was also placed on developing avocational items that gave promise of discrimination between the various fields. The completion of this step included review and revision of the schedule by agricultural educators and guidance personnel.

An extensive field trial was conducted with 128 items administered to 157 adults in four occupations. Their response patterns were scaled and compared to student responses of 771 high school students. Percentile scores were developed for the adults' scores. The keys developed discriminated between occupations to the extent that over 84 percent of the adults were placed in their proper job-titles on the basis of their highest percentile score.

The second step involved the selection of the sampling areas. The plan used selected school districts as an identifiable geographic division of New York State. The sample was stratified by economic areas and two districts were chosen in each of the twelve areas by the table of random numbers. A twenty-fifth district was chosen at large.

Early experience with interviewers revealed a lack of a sufficient number of individuals in certain job-titles within the smaller districts. Interviewers were permitted to obtain the schedules within the county the school district represented. The economic area served further to preserve the distribution of the schedules throughout the state.

The third step involved selection and training of the interviewers who administered the schedules. Interviewers were used to collect the data for the following reasons:

1. To avoid the bias resulting from groups who do not answer mailed questionnaires.

2. To provide a means of identifying persons who met the criteria within each of the sampling areas.

3. To obtain schedules that were completed on a standardized basis.

4. To expidite the collection of data.

Training of the interviewers involved the orientation to the study and its importance, the identification of men and women who met the criteria for the study sample, thorough familiarity with the instruments and the means of obtaining the completed schedules.

Nominations for interviewers were obtained from people who knew the local areas to be sampled or by contacting school administrators or guidance personnel within the districts involved. The people suggested by these sources were interviewed by the principal investigator. If the interview proved mutually satisfactory the training procedure was followed with the prospective interviewer. The interviewer was supplied with information sheets, schedules, information on completing the information sheets and schedules, supplies needed to complete the interview schedules, and forms and envelopes needed to return the completed schedules to the principal investigator.

In the fourth step the interviewers were encouraged to gather a partially structured sample of schedules. It was intended by this means to obtain a sufficient cross-section of job-titles to represent properly the occupational fields. The interviewers were to interview persons who were satisfied and felt successful in their job and who had been employed for a period of three years or more. Follow-up visits, telephone calls and letters were used during this stage of the data gathering process.

The fifth step consisted of identifying the desirable computer program to be used in the analysis of the data. The most appropriate computer program was identified as the Generalized Item and Test Analysis Program (GITAP) compiled by Frank Baker (1) of the University of Wisconsin. This program computes a series of analyses for each of the items included in the schedule as well as summary statistics for the whole instrument. These statistics include a score for each individual, a frequency distribution of scores, internal reliability on the Hoyt Analysis of Variance Method, number in the sample, mean, standard deviation, sum of scores, sum of squares, correlation of each item response to high scores, level of difficulty, number selecting each choice option, and two curve fitting techniques in Beta and X_{50}.

The sixth step consisted of applying this program and the following procedure to the analysis of the data collected on the schedules. Preliminary criterion key values for the GITAP program were established on the basis of differences in answer position percentages using Strong's scale (11, p. 612). The following scale values for the differences between the criterion group and the in-general group resulted:

Scale Score	Amount of the Percentage Difference
0	- 30 percent or more
1	- 15 to - 29.9 percent
2	- 14.9 to + 14.9 percent
3	+ 15 to + 29.9 percent
4	+ 30 percent or more

These scale values represent + 2 to - 2 scores with the addition of a constant (2) to each score to make the scores positive. The result is a 0 to 4 five-point scale. Items that would have no differences and therefore show all 2's on the scale were arbitrarily set to 0 so that they did not enter into the scoring.

These same score values could have been determined by computing chi-square for each scoring position for each item but the use of the formula based on the laws of probability made the procedure much simpler.

The GITAP program used this preliminary scale value and determined the relationship between the answer position and a high score on each individual key. The resulting correlation was used as a basis for determining the items which should have high values. The revised key values were scaled up or down according to the strength of the correlation to high scores on the following pattern:

Revised Scale Score	Amount of Correlation
0	- .60 or higher negative correlation
1	- .30 to - .59 correlation
2	- .29 to + .29 correlation
3	+ .30 to + .59 correlation
4	+ .60 or higher correlation

This five point scale results in a 0-4 positive key using the same constant (2) to eliminate negative scoring.

Step seven involved the selection of the final items for the Agricultural Occupations Interest Scale and the formulation of the final keys for the selected items. These final items were chosen on the basis of discriminating power shown on the criterion keys and the correlations reported in the item analysis. All items contributing a correlation of - .60 or + .60 were included. Items contributing at the - .30 to - .59 and the + .30 to + .59 levels were included to make the total of 100 items. These items were used to strengthen the keys that needed such strengthening.

The final step consisted of completion of the report and distribution of the results to interested people.

RESULTS

A total of 789 schedules were obtained during the course of the investigation. Of these, 767 were used in the analysis of data. The schedules not used were considered to contain too many unanswered items. In the development of the scale and final keys the agricultural production criterion group was composed of 200 men, the ornamental horticulture criterion group 96, the agricultural business group 144, the agricultural mechanization group 91 and the conservation group 68. A complete summary of the final sample used appears in Appendix C. The correlations reported on the final keys are based on the total group of scores.

Developing the Production Agriculture Scale

Men's responses were scored on the criterion key. The resulting mean score was 222 for the 200 men in the criterion group and 203 for the 399 men in the in-general group. The mean for all men was 210 with a standard deviation of 19. The criterion group had 179 whose scores were above the mean of the in-general group. The production agriculture group had 79 of the 200 that scored one standard deviation or more above the mean of all men. The scores ranged from 180-254 for the criterion group and from 160-243 for the in-general group.

There were 113 items with weights on the criterion key out of the 232 comprising the schedule. Of these items, 67 had scores that correlated highly with high scores. A total of 52 had weights adjusted to more nearly reflect their scale contributions. Twenty-three items were added to the revised key and 29 were dropped on the basis of these correlational values.

All men's responses were again scored using the revised keys resulting in a mean score of 274 for the criterion group contrasted to a mean score of 229 for the in-general group. The standard deviation for the composite group was 46, with 72 of the criterion group at or beyond one standard deviation above the mean of both groups. The range for the criterion group was 175-329 and from 131-319 for the in-general group.

The agricultural production final key was used with all respondents'responses for the 100 items chosen for the Agricultural Occupations Interest Scale. The criterion group scores resulting had a mean of 115 with a range of 82-137. The in-general group had a mean score of 98 and a range of 63-134. The standard deviation was 16 and the mean 102. On this key 93 of the criterion group had scores at or beyond the one standard deviation above the composite mean.

All but 7 of the 203 in the criterion group were above the mean of the in-general group.

A total of 94 women's schedules were available for the analysis of women's scores. Of these 54 were in the production agriculture field, 26 in ornamental horticulture and 14 in the other three fields. Because the criterion key construction procedure involves many thousands of mathematical operations requiring a large investment of time it was decided to use the men's criterion key as a starting point for key construction.

Women in the production agriculture group had a mean score of 202 compared to 209 for all men and 223 for men in the production agriculture criterion group. The standard deviation was 14 and the scores ranged from 179-242. Fifty-four of the final 100 items had correlations to high scores sufficient to recommend their scoring used with women's schedules. In this scale analysis all women were used as a first order approximation of a women's in-general group. The complete correlations and suggested key values are shown in Appendix D.

Developing the Ornamental Horticulture Scale

When the 96 men's responses in the ornamental horticulture occupations were scored with the criterion key their scores ranged from 171-267 with a mean of 200, compared to the in-general group mean of 190 and a range of 132-274. The composite group mean was 191 with a standard deviation of 29. Fifty-three of the criterion group scored one standard deviation or more above the mean of both groups. Of the 121 items having scoring key weights on the criterion key 25 were reduced in weighting, 18 were increased, 12 were removed and 8 others added after inspecting correlations to high scores. (All correlations used were biserial correlations.)

The ornamental horticulture group responses were again scored using the revised key. The resulting scores ranged from 120-289 with a mean of 220, the range for the in-general group was 92-289 with a mean score of 152. The standard deviation for the composite group was 45. All but 2 of the criterion group scored above the mean of the in-general group and 65 of the 96 scored one or more standard deviations above the composite mean.

When all respondents' replies to the final items were scored with the ornamental horticulture final key, the results were a mean score of 119 for the criterion group and 93 for the in-general group. The ranges were 71-164 and 51-167 respectively. The mean of all respondents

scores was 97 with a standard deviation of 29. On this basis, 58 of the 99 in the criterion group were at or beyond one standard deviation above the composite mean score. Ninety-five of the 99 were above the mean of the others in the in-general group.

Women's schedules in the ornamental horticulture analysis totaled 26. When these responses were scored on the men's criterion key for ornamental horticulture the mean was 243 and the standard deviation was 17. These scores compared to the men's mean of 200 for the criterion group and 190 for the remainder of the men.

Development of the Agricultural Business Scale

The agricultural business group was composed of 144 men. When their responses were scored on the criterion key, the mean score was 78 points as compared to a mean of 73 for the remaining groups. The range for the criterion group was 61-94 as compared to 49-102, for the in-general group. The standard deviation for the scores of all groups was 9. Scores of 22 of the 144 in the criterion group were at or beyond one standard deviation above the mean of the composite group.

For the revised key, 23 items had weights increased, one decreased, 95 items added and 9 deleted. When the criterion groups responses were scored using this key the mean scores were 259 for the criterion group and 241 for the in-general group. The range for criterion group scores was from 136-345. For the in-general group the range of scores was from 132-333. The standard deviation of all scores was 44. A total of 34 of the 144 in the criterion group scored at or beyond one standard deviation above the composite mean.

When the responses were scored on the items chosen for the Agricultural Occupations Interest Scale with the final key, the results revealed a mean score of 68 and a range from 38-89 for the criterion group and 64 for the mean and a range of 37-84 for the in-general group. The standard deviation of the composite group was 10. Of the 146 in the criterion group, 51 were one standard deviation or more above the mean of the composte group. One hundred and eight of the 146 in the criterion group were above the mean of the in-general group scores.

Development of the Agricultural Mechanization Scale

The agricultural mechanization group was composed of 91 men. When their responses were scored with the criterion key, the resulting scores ranged from 139-191 with a mean score of 168 as compared to a range of 109-189 with a mean of 148 for the in-general group. The

standard deviation of all scores was 17. Fifty of the criterion group of 91 had scores more than one standard deviation above the mean of the composite group.

Of 84 items weighted for the criterion key, 10 were adjusted upward, 2 downwards, 52 dropped and 46 others added. When the group responses were scored using this revised key the scores of the criterion group ranged from 67-219 with a mean of 144. The in-general group scores ranged from 66-223 with a mean of 151. The standard deviation of the composite group was 41. Of the criterion group, 12 had scores one standard deviation or more above the composite group mean.

When the responses were scored with the final key the criterion group scores had a range of 69-136 and a mean of 108. The in-general scores ranged from 47-134 with a mean score of 87. The standard deviation for all scores was 19, the mean of the criterion group was 108, one point below the composite mean plus one standard deviation. Seventy-two of the criterion group had scores above this level.

Developing the Conservation Scale

The criterion group was composed of 68 men whose responses were scored with the criterion key. The results were a range of scores from 149-216 with a mean of 189 while the in-general group scores ranged from 128-210 with a mean at 168. The standard deviation was 18 for the compoiste group. Of the 68 in the criterion group, 41 had scores that were one standard deviation or more above the combined mean.

A total of 82 items contributed to the criterion key, the correlations indicated 16 should have increased weights, 5 decreased weights, 57 items were dropped and 56 others added to the revised key.

The revised key was used to score the same responses with criterion group scores ranging from 81-217 with a mean score of 159, while the in-general group mean score was 165 and the range from 69-223. The standard deviation of the composite group on the revised key was 36. Of the criterion group, 5 had scores at or beyond one standard deviation above the mean.

When the conservation group scores were analyzed with the final key, the mean score was 79 with a range of 64-100, the in-general mean score was 69, the range 45-101. The standard deviation of the composite group was 10 and the overall mean score 70. There were 44 of the 82 in the criterion group with scores of 80 or more, one standard deviation above the mean.

The Agricultural Occupations Interest Scale

The three basic objectives of the study were directed to one important accomplishment of the study, that of formulating an agricultural occupations interest scale that would successfully discriminate between the five agricultural occupations fields of production agriculture, ornamental horticulture, agricultural business, agricultural mechanization and conservation.

On the basis of the results reported the following 100 items were judged to be the most successful items for the proposed scale. The items are presented here with the possible choices (L, U, and D, or (1), or (2)) noted with a sub-scale key weight suggested for each answers position. Each item not used in sub-scale formation had zero weights assigned to all answer positions.

		Sub-Scales				
	Item	Choice	Key A[1]	Key B[2]	Key C[3]	Key D[4]	Key E[4]
1.	Deliver supplies such as feel to a farm	L	0	0	3	0	1
		U	0	0	2	0	2
		D	0	0	1	0	3
2.	Plan bridle paths	L	1	3	0	0	3
		U	2	2	0	0	2
		D	3	1	0	0	1
3.	Repair farm machinery in the field	L	0	0	0	4	0
		U	0	2	0	2	0
		D	0	3	0	1	0
4.	Sell farm machinery at a dealership	L	0	1	0	4	0
		U	0	2	0	1	0
		D	0	3	0	1	0
5.	Plan floral arrangements	L	1	4	0	0	0
		U	2	3	0	0	0
		D	3	0	0	0	0
6.	Pot plants in a greenhouse	L	1	4	0	0	0
		U	2	2	0	0	0
		D	3	0	0	0	0

[1] Key A is the suggested key for the production agriculture field.
[2] Key B is the suggested key for the ornamental horticulture field.
[3] Key C is the suggested key for the agricultural business field.
[4] Key D is the suggested key for the agricultural mechanization field.
[5] Key E is the suggested key for the conservation field.

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
7. Clean and adjust farm equipment	L	0	0	0	4	0
	U	0	2	0	2	0
	D	0	3	0	1	0
8. Manage a garden store	L	0	4	3	0	0
	U	2	2	2	0	0
	D	3	1	1	0	0
9. Operate a farm	L	4	3	0	0	0
	U	1	2	0	3	0
	D	1	1	0	3	0
10. Operate a logging tractor	L	0	1	0	0	0
	U	0	2	0	0	0
	D	0	3	0	0	0
11. Demonstrate new products to farmers	L	0	0	0	1	1
	U	0	0	0	2	2
	D	0	0	0	3	3
12. Test soil samples for farmers	L	0	0	0	4	0
	U	0	0	0	2	0
	D	0	0	0	1	0
13. Determine the trees to harvest in a forest area	L	0	0	0	0	4
	U	0	0	0	0	2
	D	0	0	0	0	1
14. Select livestock on the basis of production records	L	4	0	0	0	1
	U	2	3	3	0	2
	D	1	3	3	0	3
15. Figure the proper amounts of feed ingredients for a grain mix	L	0	1	3	0	1
	U	0	2	2	0	2
	D	0	3	1	0	3
16. Take orders from customers on their farms	L	1	0	4	0	0
	U	2	0	2	0	0
	D	3	0	1	0	0
17. Advise farmers on the proper feeding of their animals	L	0	1	3	0	0
	U	0	2	2	0	0
	D	0	3	1	0	0

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
18. Feed farm animals	L	4	0	0	0	0
	U	1	2	0	0	0
	D	1	3	0	0	0
19. Sell farm supplies on the farm	L	0	1	3	4	0
	U	0	2	2	2	0
	D	0	3	1	1	0
20. Make farm machinery repairs in the the shop	L	3	0	0	4	0
	U	2	2	0	2	0
	D	1	4	0	1	0
21. Sell farm supplies at the dealership	L	4	0	3	4	1
	U	2	0	2	1	2
	D	1	0	1	0	3
22. Determine the parts to stock for a farm equipment business	L	0	0	0	4	0
	U	0	0	0	1	0
	D	0	0	0	1	0
23. Manage a hunting preserve	L	0	0	0	0	4
	U	0	0	0	0	1
	D	0	0	0	0	2
24. Buy and sell used farm machinery	L	1	1	0	4	0
	U	2	2	0	1	0
	D	3	3	0	0	0
25. Take plant specimens for disease study	L	4	4	0	0	0
	U	1	2	0	0	0
	D	0	1	0	0	0
26. Operate farm machines	L	0	0	0	0	0
	U	2	3	0	0	0
	D	4	3	0	0	0
27. Explain the advantages of new equipment to farmers	L	0	0	0	4	0
	U	2	2	0	1	0
	D	3	3	0	1	0
28. Manage the parts department in a machinery dealership	L	0	1	0	4	0
	U	0	2	0	1	0
	D	0	3	0	0	0

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
29. Raise wild game animals	L	0	0	0	0	3
	U	2	0	0	0	2
	D	4	0	0	0	1
30. Work in the parts department of a machinery dealership	L	0	1	0	4	1
	U	0	2	0	2	3
	D	0	3	0	0	2
31. Prune grape vines to improve fruit quality	L	0	4	0	1	0
	U	0	2	0	2	0
	D	0	1	0	3	0
32. Work in a garden store	L	0	4	3	0	0
	U	2	2	2	0	0
	D	4	1	1	0	0
33. Study new methods of forest management	L	0	0	0	0	4
	U	0	0	0	0	2
	D	0	0	0	0	1
34. Administer medications to animals	L	0	0	0	1	3
	U	0	0	0	2	2
	D	0	0	0	3	1
35. Compute the probable lumber yield of a forest area	L	0	0	0	0	4
	U	0	0	0	0	2
	D	0	0	0	0	1
36. Repair farm tractors	L	0	0	0	4	0
	U	0	2	0	2	0
	D	0	4	0	1	0
37. Own a farm supply business	L	1	0	3	3	0
	U	2	0	2	2	0
	D	3	0	1	0	0
38. Plan a fire fighting system for a forested area	L	0	0	3	0	3
	U	0	0	2	0	2
	D	0	0	1	0	1
39. Raise special flowers such as roses	L	1	4	0	1	0
	U	2	2	0	2	0
	D	3	0	0	0	0

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
40. Sell garden items	L	1	3	3	0	0
	U	2	2	2	0	0
	D	3	1	1	0	0
41. Repair farm machinery	L	0	0	0	4	0
	U	0	2	0	2	0
	D	0	4	0	1	0
42. Help customers determine livestock feed efficiency	L	0	1	4	0	0
	U	0	2	2	0	0
	D	0	3	1	0	0
43. Prune or shape shade trees	L	0	4	0	1	0
	U	0	2	0	2	0
	D	0	1	0	3	0
44. Take telephone orders	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
45. Make out monthly statements	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
46. Operate a ski slope	L	0	0	0	4	0
	U	0	0	0	2	0
	D	0	0	0	1	0
47. Plant commercial forests	L	0	0	3	0	3
	U	0	0	2	0	2
	D	0	0	1	0	1
48. Determine the sales policy for an agricultural business	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
49. Fertilize a growing crop	L	4	0	0	0	0
	U	2	0	0	2	0
	D	1	0	0	4	0
50. Clean grease from machinery	L	4	1	0	1	0
	U	2	2	0	3	0
	D	1	3	0	2	0

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
51. Operate a corn picker	L	0	0	0	3	0
	U	0	0	0	2	0
	D	0	0	0	1	0
52. Develop a camping area	L	1	0	0	0	4
	U	2	0	0	0	2
	D	3	0	0	0	1
53. Interview a leading farm supply dealer	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
54. Interview a leading farmer	L	0	0	3	0	1
	U	0	0	2	0	2
	D	0	0	1	0	3
55. Develop a picnic area	L	0	0	0	0	4
	U	0	0	0	0	1
	D	0	0	0	0	2
56. Buy the merchandize for a pet shop	L	1	2	3	0	0
	U	2	3	2	0	0
	D	3	1	1	0	0
57. Supervise the work of others	L	1	0	0	0	0
	U	4	0	0	0	0
	D	2	0	0	0	0
58. Check the credit ratings of others	L	0	0	3	0	1
	U	0	0	2	0	2
	D	0	0	1	0	3
59. Treat tree injuries to prevent decay	L	0	4	0	1	3
	U	0	2	0	2	2
	D	0	0	0	3	1
60. Clerk a farm sale	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
61. Cut trees and prepare sawlogs	L	4	0	0	0	3
	U	1	0	0	0	2
	D	0	0	0	0	1

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
62. Take a farm inventory	L	0	1	0	3	0
	U	0	2	0	2	0
	D	0	3	0	1	0
63. Place values on the farm inventory items	L	0	1	0	3	0
	U	0	2	0	2	0
	D	0	3	0	1	0
64. Operate a logging business	L	0	0	0	0	4
	U	0	0	0	0	2
	D	0	0	0	0	0
65. Observe wild birds and their habits	L	0	0	1	0	0
	U	0	0	2	0	0
	D	0	0	3	0	0
66. Sell farm equipment on the farm	L	0	0	3	0	0
	U	0	0	2	0	0
	D	0	0	1	0	0
67. Start plant cuttings	L	1	4	0	1	0
	U	2	2	0	2	0
	D	3	1	0	3	0
68. Raise flowers	L	1	4	0	1	0
	U	2	2	0	2	0
	D	3	0	0	3	0
69. Select livestock on the basis of type	L	4	1	0	0	0
	U	2	2	0	0	0
	D	1	3	0	0	0
70. Plant vegetable crops	L	1	3	0	0	0
	U	2	2	0	0	0
	D	3	1	0	0	0
71. Determine why engines won't start	L	0	0	0	4	0
	U	0	3	0	2	0
	D	0	3	0	2	0
72. Conduct trials of experimental farm equipment	L	0	0	0	3	1
	U	0	2	0	2	2
	D	0	3	0	1	3

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
73. Plant flowers	L	1	4	0	1	0
	U	2	2	0	2	0
	D	3	0	0	3	0
74. Keep business records	L	4	0	0	0	1
	U	2	0	0	0	2
	D	2	0	0	0	3
75. Wait on customers in a florist shop	L	1	4	0	0	0
	U	2	2	0	0	0
	D	4	1	0	0	0
76. Plan hiking trails	L	1	0	0	0	4
	U	2	0	0	0	2
	D	3	0	0	0	1
77. Raise dairy calves	L	4	0	1	0	0
	U	2	2	2	0	0
	D	1	4	3	0	0
78. Weigh grain and compute the number of bushels	L	0	1	3	0	1
	U	0	2	2	0	2
	D	0	3	1	0	3
79. Sell fertilizer for a farm crop	(1)	1	0	3	4	1
Test the soil for fertilizer need	(2)	3	0	1	1	0
80. Repair a farm tractor	(1)	0	0	0	4	3
Operate the tractor on the farm	(2)	0	0	0	0	1
81. Plan conservation practices for a given farm	(1)	1	0	0	0	3
Carry out the conservation practices on the farm	(2)	4	0	0	0	1
82. Work for a greenhouse operator	(1)	0	4	0	0	0
Work for a farmer	(2)	4	0	0	0	0
83. Work for a logging contractor	(1)	4	0	1	0	3
Work for a garden store	(2)	1	4	3	0	1

	Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
84.	Work for a golf course	(1)	0	4	0	1	3
	Work for a farm equipment dealer	(2)	0	0	0	3	1
85.	Operate a ski slope	(1)	1	1	0	0	4
	Operate a farm	(2)	3	3	0	0	1
86.	Operate a fertilizer business	(1)	0	0	3	0	1
	Operate a logging firm	(2)	0	0	1	0	4
87.	Keep the parts inventory in a machinery dealership	(1)	0	0	3	3	0
	Drive the delivery truck	(2)	0	0	2	1	0
88.	Prepare the company payroll	(1)	0	0	3	0	0
	Mix the feed the company sells	(2)	0	0	1	0	0
89.	Assemble farm machinery	(1)	3	0	0	3	0
	Wait on customers in a florist's shop	(2)	1	4	0	1	0
90.	Keep farm records	(1)	4	1	1	0	0
	Keep business records	(2)	0	3	3	4	0
91.	Pot plants in a greenhouse	(1)	0	4	0	1	0
	Fill orders for farm supplies	(2)	0	0	0	3	0
92.	Sell bulldozers	(1)	1	0	0	4	0
	Operate the bulldozer	(2)	4	0	0	0	0
93.	Take orders for materials sold by the business	(1)	1	0	0	0	0
	Deliver the orders	(2)	3	0	0	0	0
94.	Test milk for butterfat	(1)	0	4	0	0	0
	Produce the milk	(2)	4	0	0	0	0
95.	Judge livestock	(1)	0	1	0	0	0
	Plan an advertising campaign	(2)	0	3	0	0	0
96.	Handle customer complaints	(1)	4	3	0	0	0
	Keep the firm's books	(2)	1	2	0	0	0

Item	Choice	Sub-Scales Key A	Key B	Key C	Key D	Key E
97. Start plant cuttings	(1)	0	4	0	0	3
Care for farm animals	(2)	0	0	0	0	1
98. Make floral arrangements	(1)	0	4	0	1	0
Plan a farm shop	(2)	0	0	0	3	0
99. Work in a garden store	(1)	0	4	0	3	0
Work on the farm	(2)	4	0	0	1	0
100. Own a floral shop	(1)	1	4	0	0	0
Own a farm service business	(2)	3	0	0	0	0

In order to use the scale, the items with their choices (L, U, and D, or (1), or (2)) indicated would be administered to the student or respondent. The completed scale would have the sub-scale scoring keys applied and scores totaled for each sub-scale. The resulting five scores could be converted to percentile ranks and used with a profile sheet to show the student graphically how his interests compare with successfully employed adults in each of the five occupational fields. The percentile ranks for scores of the men in the sample are shown in Appendix F.

DISCUSSION

On the basis of scores for the criterion keys approximately 40 percent of the production agriculture group had scores exceeding one standard deviation above the mean. On the revised key the percentage dropped slightly to 36 percent reaching that score level. Use of the final key and the elimination of the least valuable items increased discrimination to a total of approximately 47 percent of the sample exceeding one standrad deviation above the composite group mean. These results indicate that the use of the in-general group with people in closely related occupations for key revision reduced the discrimination power of the instrument.

The women's group was largely dominated by the production agriculture group which made up more than half of the total numbers of women's schedules. The scores for these women were only 4 percent below men in-general and 10 percent below the men in the corresponding men's criterion group. The resulting key values, reported in the Appendix, are suggested for further study only, because of the limited size of the women's group.

The discrimination value of the ornamental horticulture scale was improved with the first revision with an increase from 55 to 68 percent in the number of criterion group members who had scores one or more standard deviations beyond the composite mean. The final key resulted in a drop of three percentage points in the discriminating level between respondents.

The overall discrimination level of the revised key was desirable and the final key made only a minor change in this level. It may be concluded that because of the large number of items that contributed to the discrimination of the ornamental horticulture revised key that the elimination of the items not used in that scale caused the slight reduction in discrimination on the final key. The ornamental horticulture group as a whole exhibited more difference in interest patterns as compared to the in-general group than did any of the four other groups. This fact is illustrated by the numbers with scores above the standard deviation level.

The women's criterion group in ornamental horticulture had higher scores than men in the corresponding criterion group. Most of the women represented by schedules in the analysis had interests that scored high in ornamental horticulture as compared to other scale scores.

The scores of both men and women in ornamental horticulture indicated that the group had rather homogeneous interests.

When the agricultural business key was revised some improvement in discrimination was effected. An increase in those with scores at or beyond one standard deviation above the composite mean from 15 percent to 24 resulted. This level of discrimination indicated that the group had interests that were not greatly different from the people in other groups as measured by the 232 items included. When the final key was used the discrimination level was increased to 37 percent at the standard deviation level. This key again failed to discriminate the agricultural business group as well as desired. This failure indicates a need for the synthesis of more items for additional study with this group. The difficulty in developing discriminating patterns of interest for the group suggests that this group has more heterogeneity in agricultural interests than the preceeding groups.

The criterion key resulted in 55 percent of the agricultural mechanization group scores one or more standard deviations above the composite mean. The revised key decreased discrimination, reducing the percentage from 55 to 13. The final key improved the discrimination to 66 percent who scored a standard deviation or more above the composite mean. The group appeared to have heterogeneous interest patterns. It is believed that the removal of marginal items aided the final key in its discrimination.

The wide range of job-titles included in the conservation group, from forestry to recreation, is reflected in the key development result pattern. The criterion key placed 61 percent at the standard deviation level while the revised key lowered the percentage to 7, the final key reflected 51 percent at the plus one standard deviation level.

Probably the most important characteristic of any standardized test is its predictive value, how well does it measure (predict) what it is supposed to measure. In order to give a preliminary answer for the proposed Agricultural Occupations Interest Scale, all men's and women's scores were converted to percentile ranks and the highest percentile score for each was considered to be the predicted occupation for each person. If two percentile ranks were equal the person was considered to have been correctly predicted if either was the correct occupation. (These tie scores accounted for less than one percent of the 3,810 scores (five keys times 762 scores).)

The results revealed the overall success of the prediction:

Field	Percent of Correct Prediction Men	Women
Production Agriculture	76	46
Ornamental Horticulture	83	78
Agricultural Business	53	--
Agricultural Mechanization	72	--
Conservation	69	--
Overall Percent of Correct Prediction	71	53

The percentage of correct predictions for production agriculture, ornamental horticulture and agricultural mechanization offer excellent discrimination, the agricultural business prediction was less than desired though much better than chance (20), the conservation percentages approach the desired levels.

The prediction failure in agricultural business indicates the failure to tap the fundamental interest patterns for the group for they have their highest percentile scores in other fields 47 percent of the time.

The conservation discriminating percentage could be improved with the additional study of other items and the increase in numbers of schedules obtained. This was the smallest sample in the analysis.

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Conclusions

From the data analyzed, the following conclusions are drawn:

1. Agricultural production individuals had interests that were patterned and were sufficiently different from other individuals in agricultural occupations that they could be differentiated with reasonable success.

2. Individuals in the ornamental horticulture classification had interests that were patterned and were sufficiently different from other individuals in agricultural occupations that they could be differentiated with reasonable success.

3. The interests of individuals in the agricultural business classification were not patterned in a way that could be differentiated with the desired degree of success based on the items in the study.

4. The interests of the individuals in the agrcultural mechanization classification were patterned in a manner sufficiently different from other agricultural occupations groups that they could be discriminated with success.

5. The scores of the conservation group indicated that interest patterns were discovered that discriminated these individuals with moderate success.

6. Women's scores ranked only slightly lower than men's on two of the criterion scales and higher on the third. Until additional women's schedules can be obtained and analyzed the men's scoring keys could be used with the recognition of the small score differential between men and women.

7. For groups with highly heterogeneous interests criterion keys should be used with criterion groups alone. Use of the in-general group resulted in correlations that weakened the discrimination levels of such scales. The diverse interest patterns involved probably account for this difference.

8. For groups with highly homogeneous interests when compared to an in-general group with different interests, scale refinement can be readily effected with the use of an in-general group.

Implications

1. Women may not need separate keys for the suggested Agricultural Occupations Interest Scale. Different norms for women's scores may be adequate.

2. The diverse interests in several groups suggests that successful sub-scales could be developed for job-titles within the agricultural business, agricultural mechanization and conservation groups.

3. Sub-scales for specific job-titles might be developed for guidance work with older youth. For current high school programs, the scales for major fields would serve to guide students in the selection of courses or specialty programs.

4. Wide trial use of the Agricultural Occupations Interest Scale with youth seems justified on the basis of successful patterns of interests identified by the scoring keys.

Recommendations

1. More items should be synthesized and tested with people in agricultural business and conservation job-titles.

2. Additional schedules should be obtained from women in the ornamental horticulture, agricultural business, agricultural mechanization and conservation occupations for study and the development of norms.

3. Additional schedules should be obtained from women in the ornamental horticulture, agricultural business, agricultural mechanization and conservation occupations for study and the development of scales.

4. The Agricultural Occupations Interest Scale should be used with youth for guidance purposes.

5. The Agricultural Occupations Interest Scale should be used with large numbers of boys and girls to develop norms.

6. Follow-up over a period of 5 or more years with boys and girls who have completed the scale to determine the job-titles entered and pursued as well as their job satisfaction.

7. The Agricultural Occupations Interest Scale should be used with the recognition of its trial nature until validation and experience can prove its guidance value.

SUMMARY

A study was conducted to identify items that would reveal interest patterns of adults in the five agricultural occupations fields of production agriculture, ornamental horticulture, agricultural business, agricultural mechanization and conservation. These identified patterns could be used to compare youths interest patterns for guidance purposes.

The major objectives of the study were:

1. To develop interest items to discriminate between the five agricultural occupations areas of production agriculture, ornamental horticulture, agricultural business, agricultural mechanization and conservation.

2. To test these items on successful people in the several job-titles within agricultural occupational fields to determine the successfully discriminating items.

3. To identify and compile in the form of a scale the most successful 75-100 items and to develop scoring keys for each field.

Twenty-three interviewers were selected and trained who conducted 789 interviews resulting in completed schedules. Of these, 767 were used in the analysis of data.

A primary computer program was identified and used in the analysis of data through the Control Data 1604 Computer. The Generalized Item Test Analysis Program provided summary statistics and individual item analysis correlations useful in formulating and testing keys.

An Agricultural Occupations Interest Scale of 100 items was developed with keys for scoring the occupational fields investigated. The scale was recommended for further study and trial use with youth.

It was concluded that agricultural interests were patterned and discrimination between agricultural occupations fields was possible. It was further concluded that no great differences between men's and and women's scores on the scale were evident.

Recommendations were made for further study of items for two of the five areas and for use of the instrument in guidance. A long-term follow-up of students completing the scale was recommended for the purpose of validation. The final recommendation was for consideration of the trial nature of the scale until its guidance value was demonstrated.

REFERENCES

1. Baker, Frank B. "Generalized Item and Test Analysis Program -- A Program for the Control Data 1604 Computer," Educational and Psychological Measurement, Vol. 23, No. 1, 1963, pp. 187-193.

2. Board of Cooperative Educational Services. A Survey of Student Interests in Five Agricultural Occupations Groups. Yorkville, New York. Prepared by H. L. Noakes, Bureau of Agricultural Education, Albany, New York, 1965.

3. Brainard Occupational Preference Inventory. New York, New York: Psychometric Affiliates, 1959.

4. Cleeton, G. U. Cleeton Vocational Interest Inventory. Bloomington, Illinois: McKnight & McKnight, 1943.

5. Curtis, J. W. Curtis Interest Scale. Chicago, Illinois: Psychometric Affiliates, 1959.

6. Ginzberg, E., Ginsburg, J. W., Axelrod, S., and Herma, J. L. Occupational Choice. New York: Columbia University Press, 1951.

7. Johnson, H. Technique for Determining the Professional Interests of Home Economists. Ph.D. dissertation, Iowa State College, Ames, Iowa, 1950.

8. Kuder, G. F. Kuder Preference Record, Occupational. Chicago, Illinois: Science Research Associates, 1956.

9. Lee, E. B., and Thorpe, L. P. The Occupational Interest Inventory. California Testing Bureau, 1956.

10. Strong, E. K. Strong Vocational Interest Blank for Men. Palo Alto, California: Stanford University Press, 1941.

11. Strong, E. K. Vocational Interests of Men and Women. Palo Alto, California: Stanford University Press, 1941.

12. Walker, R. W., Stevens, G. Z., and Hoover, N. K. The Pennsylvania Vocational Agriculture Interest Inventory. Pennsylvania State University, Department of Agricultural Education, University Park, Pennsylvania, 1963.

GLOSSARY

Agricultural Interests: Interests that relate to agriculture as contrasted to interests that relate to other occupational fields.

Agricultural Occupations Interest Scale: The list of the 100 most successful interest items chosen as a result of this research study.

Composite Group: The in-general and criterion groups combined.

Criterion Group: The term applied to the specific group whose interests are being analyzed.

Criterion Key: The key developed from the direct percentage comparison of differences between a criterion group and the in-general group responses.

Final Key: The key suggested for the Agricultural Occupations Interest Scale for a given field.

In-general Group: The term applied to the other four groups when contrasted to a criterion group being studied.

Job-Title: A specific name or title applied to a group of tasks performed by one person.

Key: A system of weights or numerical values applied to interest items to reflect the degree of discrimination between the criterion and the in-general group.

Revised Key: The key resulting from the correlations reported by the GITAP program.

Scale: A term applied to the group of interest items that differentiate between criterion and in-general groups.

Occupational Field: A group of job-titles concerned with similar business activities.

Weight: The specific numerical value placed on a given answer position for a key that represents the degree of discrimination between the criterion group and the in-general group.

APPENDIX A

RESEARCH INSTRUMENTS

AGRICULTURAL INTEREST INFORMATION SHEET

Identification Code [ ][ ][ ][ ] District No. [ ][ ]

Respondent's Age (check one)

Under 20	___
20 - 29	___
30 - 39	___
40 - 49	___
50 - 59	___
60-69	___
70 or over	___

Name _____

Address _____

_____

Highest Education Level Completed (check one)

8th Grade or Less	___
9th Grade	___
10th Grade	___
11th Grade	___
High School Graduate	___
1 Year of College	___
2 Years of College	___
3 Years of College	___
4 Years of College	___

Briefly Describe the Respondent's Duties _____

_____

Type of Business in Which the Respondent is Employed (check one)

Farming	___
Horticultural	___
Agricultural Service or Supply	___
Farm Machinery and Equipment	___
Conservation, Recreational Facilities	___

To What Degree Does the Respondent Find His Job Satisfying? (check one)

Very Satisfying	___	Dissatisfying	___
Satisfying	___	Very Dissatisfying	___

Neither Satisfying or Dissatisfying ___

To What Degree Does the Respondent Feel Successful in His Job? (check one)

Very successful	___	Unsuccessful	___
Successful	___	Very Unsuccessful	___

Neither Successful or Unsuccessful ___

Number of Employees in the Business Full-Time _____ Part-Time _____

Other _____

(This form is to be completed by the interviewer)

YOUR INTEREST IN AGRICULTURAL OCCUPATIONS

INSTRUCTIONS 1. Please mark the following items quickly, recording your first impression. 2. Circle the L if you like the activity described by the item. 3. Circle the D if you dislike the activity described by the item. 4. Circle the U only if you are undecided whether or not you like the item.

1.	Judge livestock for desirable conformation	L	U	D
2.	Determine the grades of farm grains	L	U	D
3.	Raising pets	L	U	D
4.	Deliver supplies such as feed to a farm	L	U	D
5.	Grind and mix livestock feed	L	U	D
6.	Plan bridle paths	L	U	D
7.	Do grafting of fruit trees	L	U	D
8.	Repair farm machinery in the field	L	U	D
9.	Sell farm machinery at a dealership	L	U	D
10.	Plan advertising campaigns for agricultural equipment	L	U	D
11.	Plan floral arrangements	L	U	D
12.	Pot plants in a greenhouse	L	U	D
13.	Be an instructor in horsemanship	L	U	D
14.	Clean and adjust farm equipment	L	U	D
15.	Raise game birds	L	U	D
16.	Organize business forms for an agricultural business	L	U	D
17.	Groom livestock for shows	L	U	D
18.	Prune fruit trees	L	U	D
19.	Observe methods of caring for livestock	L	U	D

20.	Manage a garden store	L	U	D
21.	Operate a saw mill	L	U	D
22.	Operate a farm	L	U	D
23.	Be noted for producing the highest quality livestock	L	U	D
24.	Operate a logging tractor	L	U	D
25.	Conduct trials of new weed sprays	L	U	D
26.	Demonstrate new products to farmers	L	U	D
27.	Test soil samples for farmers	L	U	D
28.	Determine the trees to harvest in a forest area	L	U	D
29.	Take soil samples for farmers	L	U	D
30.	Select livestock on the basis of production records	L	U	D
31.	Figure the proper amounts of feed for a grain mix	L	U	D
32.	Take orders from customers on their farms	L	U	D
33.	Operate a chain saw	L	U	D
34.	Advise farmers on the proper feeding of their animals	L	U	D
35.	Feed farm animals	L	U	D
36.	Harvest pulp wood	L	U	D
37.	Sell farm supplies on the farm	L	U	D
38.	Make farm machinery repairs in the shop	L	U	D
39.	Make floral arrangements that someone else designed	L	U	D
40.	Sell farm supplies at the dealership	L	U	D
41.	Operate a riding stable	L	U	D

42.	Determine the parts to stock for a farm equipment business	L	U	D
43.	Manage a hunting reserve	L	U	D
44.	Treat injured animals	L	U	D
45.	Act as a hunting guide	L	U	D
46.	Train fruit trees	L	U	D
47.	Pick strawberries	L	U	D
48.	Act as a fishing guide	L	U	D
49.	Buy and sell livestock	L	U	D
50.	Participate in trap shooting events	L	U	D
51.	Work for yourself risking your own capital	L	U	D
52.	Buy and sell used farm machinery	L	U	D
53.	Take plant specimens for disease study	L	U	D
54.	Operate farm machines	L	U	D
55.	Work as a state park superintendent	L	U	D
56.	Explain the advantages of new equipment to farmers	L	U	D
57.	Keep the books for an agricultural business	L	U	D
58.	Manage the parts department in a machinery dealership	L	U	D
59.	Raise wild game animals	L	U	D
60.	Work for a riding stable	L	U	D
61.	Work in the parts department of a machinery dealership	L	U	D
62.	Care for sick farm animals	L	U	D
63.	Attend farm auction sales	L	U	D

64.	Prune grape vines to improve fruit quality	L	U	D
65.	Work independently for yourself	L	U	D
66.	Work in a garden store	L	U	D
67.	Study new methods of forest management	L	U	D
68.	Conduct trials of new crop production methods	L	U	D
69.	Administer medications to animals	L	U	D
70.	Operate a golf driving range	L	U	D
71.	Calibrate a farm weed sprayer	L	U	D
72.	Make building repairs	L	U	D
73.	Work for a golf driving range	L	U	D
74.	Make tests for quality of meats.	L	U	D
75.	Compute the probable lumber yield of a forest area	L	U	D
76.	Develop a new process for harvesting vegetable crops	L	U	D
77.	Repair farm tractors	L	U	D
78.	Own a farm supply business	L	U	D
79.	Plan irrigation systems	L	U	D
80.	Plan a fire fighting system for a forested area	L	U	D
81.	Be noted for raising the highest quality crops	L	U	D
82.	Raise special flowers such as roses	L	U	D
83.	Sell garden items	L	U	D
84.	Plan a fire watch for a given forested area	L	U	D
85.	Observe methods of crop production	L	U	D
86.	Work as a park caretaker	L	U	D

87.	Repair farm machinery	L	U	D
88.	Classify land for its proper use	L	U	D
89.	Operate a bulldozer	L	U	D
90.	Control temperature in a greenhouse	L	U	D
91.	Help customers determine livestock feed efficiency	L	U	D
92.	Help pour concrete	L	U	D
93.	Carry out a conservation plan on the farm	L	U	D
94.	Prune or shape shade trees	L	U	D
95.	Sharpen tools before using them	L	U	D
96.	Work for a logging contractor	L	U	D
97.	Conduct advertising contests	L	U	D
98.	Try new ways of doing a task	L	U	D
99.	Work with other people	L	U	D
100.	Be given a free-hand in the method of doing a task	L	U	D
101.	Grow Christmas trees	L	U	D
102.	Sell on the commission basis	L	U	D
103.	Plan conservation practices for farms	L	U	D
104.	Work with materials instead of people	L	U	D
105.	Be given a test you cannot finish in the alloted time	L	U	D
106.	Be responsible for firing workers	L	U	D
107.	Work for a Christmas tree grower	L	U	D
108.	Participate in sports	L	U	D
109.	Take telephone orders	L	U	D

110. Make out monthly statements	L	U	D
111. Estimate costs of tree removal	L	U	D
112. Operate a ski slope	L	U	D
113. Plant commercial forests	L	U	D
114. Advise orchardists on fruit culture	L	U	D
115. Determine the sales policy for an agricultural business	L	U	D
116. Fertilize a growing crop	L	U	D
117. Clean grease from machinery	L	U	D
118. Operate a corn picker	L	U	D
119. Develop a camping area	L	U	D
120. Interview a leading farm supply dealer	L	U	D
121. Own a farm	L	U	D
122. Interview a leading farmer	L	U	D
123. Be an officer in an organization to which you belong	L	U	D
124. Develop a picnic area	L	U	D
125. Buy the merchandise for a pet shop	L	U	D
126. Operate a portable feed mill	L	U	D
127. Supervise the work of others	L	U	D
128. Check the credit ratings of customers	L	U	D
129. Treat tree injuries to prevent decay	L	U	D
130. Plan hikes to observe wildlife	L	U	D
131. Test the moisture content of farm grains	L	U	D
132. Write advertising for a ski slope	L	U	D

133. Prepare the company payroll	L	U	D
134. Participate in wildlife hikes	L	U	D
135. Operate a delivery truck	L	U	D
136. Clerk a farm sale	L	U	D
137. Work as a forest ranger	L	U	D
138. Serve on a club committee	L	U	D
139. Cut trees and prepare sawlogs	L	U	D
140. Operate a farm tractor	L	U	D
141. Take a farm inventory	L	U	D
142. Place values on the farm inventory items	L	U	D
143. Operate a logging business	L	U	D
144. File business correspondence	L	U	D
145. Do tree removal work	L	U	D
146. Raise purebred livestock	L	U	D
147. Observe wild birds and their habits	L	U	D
148. Spray forest areas to control pests	L	U	D
149. Sell farm equipment on the farm	L	U	D
150. Start plant cuttings	L	U	D
151. Raise flowers	L	U	D
152. Take a party on a camping trip	L	U	D
153. Aid a veterinarian as he operates on an animal	L	U	D
154. Determine farm forage grades	L	U	D
155. Select livestock on the basis of type	L	U	D
156. Go on camping trips into remote areas	L	U	D

157. Care for farm animals	L	U	D
158. Design new or improved equipment	L	U	D
159. Attend livestock shows	L	U	D
160. Take a party on a winter camping trip in the forest	L	U	D
161. Plant vegetable crops	L	U	D
162. Be known for producing the highest crop yield	L	U	D
163. Determine why engines won't start	L	U	D
164. Go on winter hikes in the forest	L	U	D
165. Work for a hunting reserve	L	U	D
166. Work for someone else who risks his own capital	L	U	D
167. Conduct trials of experimental farm equipment	L	U	D
168. Teach others about wildlife	L	U	D
169. Make plans for remodeling farm buildings	L	U	D
170. Conduct livestock feeding trials	L	U	D
171. Install irrigation systems	L	U	D
172. Provide food for birds	L	U	D
173. Plant flowers	L	U	D
174. Attend livestock auctions	L	U	D
175. Seek advice before making a decision	L	U	D
176. Provide cover for small game	L	U	D
177. Assume the responsibility for making business decisions	L	U	D
178. Keep close checks on the work of other people	L	U	D
179. Operate a ski tow	L	U	D

180. Plan a wildlife refuge	L	U	D
181. Keep business records	L	U	D
182. Wait on customers in a florist shop	L	U	D
183. Supervise the erection of soil conserving structures	L	U	D
184. Plan hiking trails	L	U	D
185. Raise dairy calves	L	U	D
186. Weigh grain and compute the number of bushels	L	U	D

PART II. PREFERENCES

For each of the following pairs, circle the (1) or the (2) in front of the activity you prefer.

187. (1) Work independently.
(2) Work with other people.

188. (1) Start a new enterprise where you risk your capital.
(2) Work for a person who risks his own capital.

189. (1) Try new ways of doing things.
(2) Stick to tested methods.

190. (1) Trust others to do their work.
(2) Keep close tabs on the work of others.

191. (1) Work in the open air.
(2) Work inside a store.

192. (1) Take orders by telephone.
(2) Take orders in person.

193. (1) Seek cooperation from others.
(2) Issue an order, require obedience.

194. (1) Be given a task and a free hand to do the job.
(2) Be given detailed instructions on how to do the job.

195. (1) Participate in sports.
(2) Be a spectator at sports events.

196. (1) Hire and fire workers.
(2) Let someone else do the hiring and firing.

197. (1) Make decisions on your own.
(2) Seek advise before making the decisions

198. (1) Fertilize a growing crop.
(2) Deliver the fertilizer.

199. (1) Sell fertilizer for a farm crop.
(2) Test the soil for fertilizer need.

200. (1) Sell on a commission basis.
(2) Sell on a salary plus commission.

201. (1) Repair a farm tractor.
(2) Operate the tractor on the farm.

202. (1) Plan conservation practices for a given farm.
(2) Carry out the conservation practices on the farm.

203. (1) Determine the sales policy for an agricultural business.
(2) Sell on the basis of this sales policy.

204. (1) Work for a machinery dealer.
(2) Work for a fertilizer dealer.

205. (1) Work for a farm supply business.
(2) Work for an artificial breeding cooperative.

206. (1) Work for a greenhouse operator.
(2) Work for a farmer.

207. (1) Work for a logging contractor.
(2) Work for a garden store.

208. (1) Work for a golf course.
(2) Work for a farm equipment dealer.

209. (1) Operate a ski slope.
(2) Operate a farm.

210. (1) Operate a fertilizer business.
(2) Operate a logging firm.

211. (1) Keep the parts inventory in a machinery dealership
(2) Drive the delivery truck.

212. (1) Buy the merchandise for a farm supply store.
(2) Check the credit ratings of the customers.

213. (1) Prepare the company payroll.
(2) Mix the feed the company sells.

214. (1) Clean grease from a truck engine.
(2) Identify the replacement parts for the mechanic.

215. (1) Assemble farm machinery.
(2) Wait on customers in a florist's shop.

216. (1) Plan a building.
(2) Construct the building.

217. (1) Help people plan cropping systems.
(2) Plant the crops.

218. (1) Keep farm records.
(2) Keep business records.

219. (1) Pot plants in a greenhouse.
(2) Fill orders for farm supplies.

220. (1) Sell bulldozers.
(2) Operate the bulldozer.

221. (1) Take orders for materials sold by the business.
(2) Deliver the orders.

222. (1) Ask a neighbor for help.
(2) Hire extra help so you won't owe the neighbor for help.

223. (1) Take a farm inventory.
(2) Demonstrate farm equipment.

224. (1) Test milk for butterfat.
(2) Produce the milk.

225. (1) Judge livestock.
(2) Plan an advertising campaign.

226. (1) Handle customer complaints.
(2) Keep the firm's books.

227. (1) Start plant cuttings.
(2) Care for farm animals.

228. (1) Replace the handle in a good shovel.
(2) Buy a new shovel.

229. (1) Make floral arrangements.
(2) Plan a farm shop.

230. (1) Handle the grain in a feed store.
(2) Be responsible for making the business decisions.

231. (1) Work in a garden store.
(2) Work on the farm.

232. (1) Own a floral shop.
(2) Own a farm service business.

APPENDIX B

INTERVIEWER'S MANUAL

The Purposes of the Study

The purpose of the study is to identify interest items that can successfully discriminate interests in agricultural occupations in the following fields: ornamental horticulture, production agriculture, agricultural business, agricultural mechanization, and conservation.

When a sufficient number of successful items are identified and assembled into an interest scale, high school students' interests patterns can be compared to those of successful employees in agricultural businesses. Guidance counselors and agriculture teachers can advise students, with objective aids, in their course selection decisions.

Importance of the Study

This project offers an opportunity to develop an interest scale that can save a great deal of wasted time and effort in training for the wrong occupational field.

If a persons interests are similar to people who are successful in a given occupation, this person is more likely to feel at home in that occupational environment.

With the emergence of agricultural courses to train students in a number of special areas, such a guidance tool is more essential for intelligent course choices.

The people who complete the interest items for you will be making a worthwhile contribution.

Identification of Sample Members

We have set five criteria for testing a sample member before filling out an interview schedule to include in the study. These five items or questions are:

1. Nomination by someone who believes he (or she) is successful in his (or her) particular field.

2. The person has been employed in this field for a period of three years (2.5+ years). The sample member need not have held the present job for this time; he (or she) may have been promoted from other jobs in the same field.

3. He (or she) feels successful or very successful in his (or her) present job-title.

4. He (or she) feels satisfied or very satisfied in his (or her) present job-title.

5. He (or she) is willing to complete the interest items.

Sources of Nominations for the Sample

Some of the people in the community who can serve to suggest the most successful well-adjusted people to interview for the sample are:

The vocational agriculture teacher
County agent
4-H Club agent
Local bankers
Agricultural credit organization personnel
Soil conservation personnel
Chamber of Commerce or Commercial Club secretaries
Farm organization officers
Ministers
Local businessmen
Other respondents
Local people or people who know the community

Nominations should be obtained from three or more of these persons and those nominated most frequently in each classification or job-title would be chosen for the interviews.

Completing the Information Sheet

Perhaps the first thing to do in completing the information sheet is to raise the important questions of criteria first.

Success - mark the sheet appropriately.
Satisfaction - mark the appropriate space.
Years in this type of business - note the years on the bottom line marked other.

If any of these answers are rejected by the criteria, thank the person and go on to the next interview.

If the answers are in the desired range of very successful or successful, very satisfying or satisfying and 2.5+ years of experience, complete the rest of the form. Leave the identification grid blank. Mark the schedule so that it can be matched with the proper identification sheet. Complete the district number with the proper number from Appendix A of the proposal copy.

Record the name and address of the interviewee just in case a later group of questions were to be attempted with the same sample to improve a given scale. Use Mr., Miss or Mrs.

Check the appropriate levels for age and education.

If the respondent has a firm or definite job-title such as owner, manager, parts man, counter clerk, delivery truck driver, etc., please write this first. If the job-title does not appear on the suggested sample distribution list or he has multiple duties, write down the responsibility that is most important or occupies the most time, then write in the second and third most important duties. In case the respondent has doubts about his most important duties or job-title, record the answer to this question: "If your employer were to advertise for a replacement for you, what job title would he advertise?"

This important portion of the form determines the classification of the respondent in the analysis. If we place people incorrectly, the usefulness of the analysis may be impaired.

Mark the appropriate type of business, record the actual number of employees, this will help in the proper classification of the respondents.

Pointers on Interviewing

Each interview completed will make you more competent to complete the next. From each interview you will become more aware of how your "message" is getting across to the respondent. In time you will develop your own most effective technique. Until that time you may find these suggestions helpful in obtaining successful responses from those you interview.

1. Break the ice! You must get to a point of rapport before you have a willing cooperator. When this stage is reached it will usually be possible to detect. As you become more sensitive to the people you interview, this point of rapport will be more easily recognized. Some opener may occur to you on the spur of the moment,

for example an unusual desk piece may be worthy of a sincere comment. It is important to note that there is no substitute for sincerity. A warm handshake with a self introduction is nearly always in good taste.

2. State briefly the purpose of your visit and tell of the project and its importance. Stress the help to high school students. Too long an explanation may excite suspicion or resistance.

3. Show the importance of developing the interest patterns for successful people to be used to develop the scales for these occupations in order to score student forms to be used in guidance work.

4. Ask if they are willing to complete the form.

5. Complete the data sheet. (Identify by your own code the data sheet and the schedule.)

6. Have the respondent react to the interest items. Call their attention to the directions for Part I and Part II. Emphasize the importance of the first reaction. Urge them to complete every item.

7. Check the form to be sure all items have been completed.

8. Thank the respondent and ask if they want a report of their interest scores on the scales developed. If they do, record the fact on the line marked other by writing, report results. Caution them it may be in January before the project is completed, but we will supply this service to all respondents wishing a report.

<u>The Sample Distribution in Each District</u>

An average of 40-44 replies is divided as follows:

1.	Production Agriculture	3-5
	Farmer - owner or tenant	(2)
	Hired Hand (if available)	(1)
	Farm manager	(1)
	Fruit farmer	(1)
2.	Ornamental Horticulture	9-10
	Owners or managers	(2)
	Floral designer	(1)
	Salesman	(1)
	Sales or counter clerk	(1)
	Greenhouse workers (plant growers, bedders, potters, flower growers, etc.)	(1-2)

	Landscape worker	(1)
	Nursery worker	(1)
	Delivery truck driver	(1)
3.	Farm Service and Supply Businesses	9-10
	Owner or manager	(2)
	Salesman	(2)
	Counter or sales clerk	(1)
	Delivery truck driver	(1)
	Service man (repairs, adjustments)	(1)
	Fieldman	(1)
	Others, artificial inseminator, etc.	(1-2)
4.	Farm Equipment and Machinery Businesses	9-10
	Owner or manager	(2)
	Salesman	(2)
	Sales clerk	(1)
	Parts man	(1)
	Mechanic	(1)
	Delivery man	(1)
	Service man	(1)
5.	Conservation, Forestry and Recreational Facilities	8
	Ski slope operators or employees	
	Riding stable operators or employees	
	Tree service companies employees	(as available
	Lumbering concerns or logging contractors	in the area)
	Park workers	
	Park superintendents	

What to Do with Extra Nominations After Sufficient Interviews are Completed

Keep an accurate list of nominees with addresses, places of employment, etc., so that we could fall back on this list of extras.

What to Do if the District Cannot Provide Enough Respondents in a Field

Should this happen, the first possibility is to extend the district boundary to the surrounding area of the county in which the district is located. If this does not provide enough schedules, some adjustments between districts can be worked out. Perhaps this is best left to a conference with the principal investigator.

Examples of Types of Businesses Hiring Employees in the Job Titles Desired for the Study

I. Ornamental Horticulture
- Retail and wholesale forists
- Greenhouses
- Nursery businesses
- Landscape contractors
- Landscaping services
- Lawn and garden centers
- Others

II. Production Agriculture
- Farmers - owners, tenants or managers
- Orchardists or fruit farmer
- Hired hands
- Farm wives who work extensively with their husbands
- Others

III. Farm Service and Supply
- Feed, seed and fertilizer stores
- Grain elevators
- Custom sprayers, fertilizer applicators, etc.
- Conservation contractors
- Mobile mixer operators, shellers, etc.
- Artificial breeding concerns
- Farm chemical stores
- Agway stores
- Others

IV. Farm Equipment and Machinery Dealers
- Lawn mower repair shops
- Tractor and equipment dealerships
- Tractor repair businesses
- Milking machine sales
- Barn equipment sales
- Farm machinery repair shops
- Others

V. Conservation, Forestry and Recreational Facilities
- Logging contractors
- Lumbering concerns
- Riding stables
- Golf courses and country clubs
- Tree surgeons
- Tree trimmers or removal concerns
- Ski or golf pro shops
- Campsites
- Guide services - hunting or trapping
- Commercial game farms
- Others

How to Care for the Completed Schedules

When you complete the interview, mark the schedule with the same name and address as the information sheet and put them in a safe place until ready to send them to Ithaca.

Package them in a suitable envelope and address them to:

William H. Hamilton
210 Stone Hall
Cornell University
Ithaca, New York 14850

Please send them by first class mail, insured for a minimum of $4-$5 per schedule form. Get a postage and insurance receipt. Mail these separately to the address above.

APPENDIX C

DISTRIBUTION OF SCHEDULES OBTAINED FROM INDIVIDUALS
IN AGRICULTURAL OCCUPATIONS

	Men	Women	Totals
Production Agriculture	205	55	260
Ornamental Horticulture	99	32	131
Agricultural Business	147	7	154
Agricultural Mechanization	109	6	115
Conservation	94	13	107
Total	654	113	767

APPENDIX D

CORRELATIONS FOR WOMENS ANSWERS TO FINAL ITEMS AND SUGGESTED KEY VALUES FOR ORNAMENTAL HORTICULTURE AND PRODUCTION AGRICULTURE

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
1	L	-.78	0	.16	2
	U	-.29	2	-.37	1
	D	.65	4	.02	2
2	L	.04	0	-.13	2
	U	.27	0	-.32	1
	D	-.03	0	.42	3
3	L	-.52	1	.80	4
	U	-.57	1	-.23	2
	D	.69	4	-.44	1
4	L	-.37	1	.24	0
	U	.45	3	-.14	0
	D	-.05	2	-.06	0
5	L	.91	4	-.84	0
	U	-1.09	0	.23	2
	D	0	2	1.03	4
6	L	.54	3	-.51	1
	U	-.44	1	-.06	2
	D	-.36	1	.81	4
7	L	-.80	0	.65	4
	U	-.83	0	-.25	2
	D	.95	4	-.52	1
8	L	.34	3	-.60	0
	U	-.28	2	.19	2
	D	-.21	2	.44	3
9	L	.44	3	.60	4
	U	-.27	2	-.46	1
	D	.14	2	-.42	1
10	L	-1.26	0	.67	4
	U	.28	2	-.30	1
	D	.86	4	-.19	2

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
11	L	-.37	1	.52	3
	U	-.04	2	-.28	0
	D	.31	3	-.16	2
12	L	-.48	1	.02	0
	U	.02	2	-.26	0
	D	.44	3	.26	0
13	L	-.04	0	-.00	2
	U	-.07	0	-.38	1
	D	-.09	0	.43	3
14	L	-.04	2	.58	3
	U	-.55	1	-.42	1
	D	.53	3	-.33	1
15	L	-.83	0	.35	3
	U	.14	2	-.35	1
	D	.06	2	-.01	2
16	L	.07	0	-.22	2
	U	-.10	0	-.18	2
	D	.04	0	.37	3
17	L	-.04	0	.34	3
	U	-.17	0	-.52	1
	D	.17	0	.13	2
18	L	-.33	1	.41	3
	U	-.37	1	-.38	1
	D	.50	3	-.38	1
19	L	-.09	2	.05	2
	U	.42	3	-.47	1
	D	-.25	2	.31	3
20	L	-1.21	0	-.52	3
	U	.12	2	-.34	1
	D	.43	3	-.31	1
21	L	-.35	1	.23	2
	U	.31	3	-.44	1
	D	-.07	2	.13	2

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
22	L	0	2	.50	3
	U	-.37	1	-.24	2
	D	.37	3	-.19	2
23	L	-.23	0	.20	2
	U	-.06	0	-.33	1
	D	.24	0	.14	2
24	L	0	0	.29	0
	U	-.24	0	-.18	0
	D	.15	0	-.01	0
25	L	.24	0	-.01	0
	U	-.11	0	-.29	0
	D	-.18	0	.26	0
26	L	-1.04	0	.42	3
	U	-.33	1	-.41	1
	D	.71	4	-.25	2
27	L	0	2	.52	3
	U	-.55	1	-.41	1
	D	.55	3	-.20	2
28	L	0	2	.12	2
	U	-.33	1	-.41	1
	D	.33	3	.21	2
29	L	.02	0	-.27	2
	U	.13	0	-.05	2
	D	-.08	0	.31	3
30	L	-.34	1	.16	0
	U	-.33	1	-.28	0
	D	.39	3	.05	0
31	L	.49	3	-.21	2
	U	-.53	1	-.38	1
	D	-.04	2	.52	3
32	L	-.03	0	.52	3
	U	.15	0	-.05	2
	D	-.21	0	.73	4

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
33	L	-.27	2	.03	0
	U	-.31	1	-.23	0
	D	.44	3	.18	0
34	L	.54	3	.25	2
	U	-.62	0	-.37	1
	D	.10	2	.05	2
35	L	-.05	0	.22	2
	U	-.07	0	-.45	1
	D	.07	0	.22	2
36	L	-1.21	0	.36	3
	U	-.55	1	-.14	2
	D	.93	4	-.20	2
37	L	-.04	0	.27	2
	U	-.27	0	-.39	1
	D	.26	0	.13	2
38	L	-.51	1	-.30	1
	U	-.08	2	-.14	2
	D	.26	2	.31	3
39	L	.94	4	-.72	0
	U	-.99	0	.36	3
	D	-.10	2	.74	4
40	L	.39	3	-.51	1
	U	-.44	1	.01	2
	D	-.14	2	.64	4
41	L	-1.21	0	.46	3
	U	-.52	1	-.45	1
	D	.85	4	-.15	2
42	L	-.26	0	.43	3
	U	.05	0	-.23	2
	D	.02	0	-.19	2
43	L	.41	3	-.20	2
	U	-.47	1	-.44	1
	D	-.08	2	.53	3

Item Number		Ornamental Horticulture Correlation	Key Value	Production Agriculture Correlation	Key Value
44	L	.27	2	-.24	0
	U	-.09	2	.04	0
	D	-.32	1	.19	0
45	L	.13	0	-.15	0
	U	-.08	0	.01	0
	D	-.06	0	.16	0
46	L	-.78	0	-.30	1
	U	.33	3	.02	2
	D	.39	3	.19	2
47	L	-.23	2	-.20	0
	U	-.50	1	-.16	0
	D	.56	3	.25	0
48	L	-.14	0	.42	3
	U	-.21	0	-.11	2
	D	.24	0	-.05	2
49	L	.53	3	.44	3
	U	-.32	1	-.53	1
	D	-.22	2	-.06	2
50	L	-.83	0	.36	3
	U	-1.26	0	-.35	1
	D	1.29	4	-.23	2
51	L	-.55	1	.20	0
	U	-.78	0	-.28	0
	D	.85	4	-.01	0
52	L	-.41	1	-.38	1
	U	.48	3	-.12	2
	D	.04	2	.49	3
53	L	0	0	.28	0
	U	-.19	0	-.24	0
	D	.18	0	-.09	0
54	L	-.18	0	.38	3
	U	.21	0	-.28	2
	D	.03	0	-.27	2

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
55	L	-.00	2	-.40	1
	U	-.30	1	-.14	2
	D	.20	2	.64	4
56	L	-.04	0	-.10	0
	U	.10	0	-.17	0
	D	-.05	0	.21	0
57	L	.08	2	.22	0
	U	-.43	1	-.10	0
	D	.29	2	-.15	0
58	L	.18	2	.02	0
	U	.38	3	.15	0
	D	-.47	1	-.12	0
59	L	.05	0	-.17	0
	U	.25	0	-.12	0
	D	-.24	0	.25	0
60	L	-.49	1	.14	0
	U	.04	2	-.21	0
	D	.34	3	-.01	0
61	L	.40	3	.22	0
	U	-.85	0	-.02	0
	D	.85	4	-.14	0
62	L	0	0	.43	3
	U	-.29	0	-.09	2
	D	.29	0	-.40	1
63	L	0	2	.44	3
	U	-.41	1	.07	2
	D	.41	3	-.41	1
64	L	-.83	0	-.11	2
	U	-.81	0	-.50	1
	D	.95	4	.41	3
65	L	.40	3	-.28	2
	U	-.11	2	.01	2
	D	-.42	1	.42	3

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
66	L	0	0	.29	0
	U	-.29	0	.01	0
	D	.29	0	-.15	0
67	L	.37	3	-.42	1
	U	.06	2	-.03	2
	D	-.41	1	.50	3
68	L	.59	3	-.85	0
	U	-.32	1	.44	3
	D	-.62	0	.86	4
69	L	.23	2	.57	3
	U	-.76	0	-.17	2
	D	.48	3	-.39	1
70	L	.31	3	-.12	0
	U	-.10	2	-.20	0
	D	-.29	2	.28	0
71	L	-1.29	0	.26	0
	U	-.26	2	-.28	0
	D	1.15	4	-.02	0
72	L	-.83	0	.49	3
	U	-.52	1	-.43	1
	D	.57	3	.04	2
73	L	.91	4	-.85	0
	U	-.91	0	.23	2
	D	0	2	.98	4
74	L	.08	0	.09	0
	U	-.21	0	-.22	0
	D	.05	0	.04	0
75	L	.31	3	-.75	0
	U	-.37	1	.15	2
	D	-.21	2	.92	4
76	L	-.38	3	-.48	1
	U	-.21	2	-.12	2
	D	.48	3	.56	3

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
77	L	-.38	1	.62	4
	U	-.65	0	-.43	1
	D	.72	4	-.48	1
78	L	0	0	.26	0
	U	-.07	0	-.14	0
	D	.07	0	-.10	0
79	1	-.26	0	-.32	1
	2	.26	0	.34	3
80	1	0	0	.11	0
	2	-.15	0	-.11	0
81	1	.21	0	.06	0
	2	-.20	0	-.06	0
82	1	.15	0	-.58	1
	2	-.15	0	.59	3
83	1	0	0	.54	3
	2	0	0	-.54	1
84	1	.07	0	-.35	1
	2	-.21	0	.35	3
85	1	-.46	1	-.58	1
	2	.40	3	.58	3
86	1	.33	3	.41	3
	2	-.60	0	-.43	1
87	1	.37	3	-.21	0
	2	-.47	1	.21	0
88	1	.41	3	-.15	0
	2	-.52	1	.14	0
89	1	-.97	0	.77	4
	2	.97	4	-.65	0
90	1	-.22	0	.30	3
	2	.20	0	-.26	2

Item Number		Ornamental Horticulture Correlation	Ornamental Horticulture Key Value	Production Agriculture Correlation	Production Agriculture Key Value
91	1	.36	3	-.61	0
	2	-.36	1	.61	4
92	1	.45	3	-.38	1
	2	-.81	0	.38	3
93	1	.55	3	-.36	1
	2	-.55	1	.36	3
94	1	.08	0	-.30	1
	2	.05	0	.27	2
95	1	-.25	0	.54	3
	2	.24	0	-.54	1
96	1	-.22	0	-.19	0
	2	-.01	0	.08	0
97	1	.64	4	-.43	1
	2	-.64	0	.51	3
98	1	1.04	4	-.83	0
	2	-1.04	0	.83	4
99	1	.35	3	-.66	0
	2	-.35	1	.63	4
100	1	-.36	0	-.69	0
	2	.00	0	.69	4

APPENDIX E

CORRELATIONS OF FINAL ITEMS TO HIGH SCORES ON EACH KEY

Item	Choice	*Key A	Key B	Key C	Key D	Key E
1	L	.24	-.35	.37	.33	-.11
	U	-.09	.08	.05	-.05	.04
	D	-.17	.29	-.42	-.31	.09
2	L	-.33	.31	.07	-.21	.54
	U	.07	-.04	.22	.16	-.07
	D	.35	-.23	-.25	.05	-.38
3	L	.46	-.66	.23	.64	-.09
	U	-.21	.21	.06	-.19	:01
	D	-.37	.59	-.28	-.58	.09
4	L	-.00	-.37	.61	.83	-.12
	U	.05	.03	.04	-.20	.05
	D	-.04	.34	-.65	-.66	.08
5	L	-.72	.85	.01	-.48	.22
	U	.02	-.14	.20	.18	-.05
	D	.26	-.65	-.15	.30	-.16
6	L	-.65	.78	-.01	-.47	.22
	U	.02	-.08	.11	.07	-.03
	D	.58	-.67	-.07	.38	-.19
7	L	.60	-.80	.26	.70	-.19
	U	-.18	.19	.01	-.22	.07
	D	-.58	.81	-.30	-.67	-.17
8	L	-.62	.50	.51	.07	.13
	U	.15	-.14	.00	.03	-.00
	D	.54	-.43	-.56	-.10	-.13

*Key
A Production agriculture
B Ornamental horticulture
C Agricultural business
D Agricultural mechanization
E Conservation

Item	Choice	Key A	Key B	Key C	Key D	Key E
9	L	.70	-.59	.12	.16	-.27
	U	-.45	.30	.06	.05	.20
	D	-.56	.56	-.23	.27	.21
10	L	.31	-.41	.11	.26	.40
	U	-.09	-.02	.19	.07	-.10
	D	-.23	.41	-.25	-.31	-.31
11	L	-.02	-.30	.64	.62	-.12
	U	-.04	.14	.05	-.15	.04
	D	.05	.22	-.69	-.58	.10
12	L	.12	-.13	.36	.32	-.06
	U	-.08	.02	.06	-.05	-.01
	D	-.07	.14	-.50	-.34	.08
13	L	-.00	-.03	.16	.08	.54
	U	-.07	-.01	.13	.11	-.22
	D	.08	.05	-.37	-.23	-.47
14	L	.63	-.61	.04	.28	-.34
	U	-.33	.24	.31	.01	.15
	D	-.44	.50	-.35	-.35	.27
15	L	.41	-.49	.31	.36	-.35
	U	-.14	.08	.19	.01	.15
	D	-.32	.47	-.50	-.40	.26
16	L	-.14	-.15	.74	.55	-.10
	U	.03	.03	-.09	-.12	.04
	D	.14	.15	-.80	-.54	.08
17	L	.25	-.37	.44	.35	-.17
	U	-.11	.05	.13	.04	05
	D	-.17	.37	-.63	-.43	.15
18	L	.65	-.57	.10	.13	.16
	U	-.41	.28	.18	.09	.08
	D	-.55	.55	-.26	-.23	.16
19	L	-.06	-.23	.75	.68	-.08
	U	.04	-.01	-.03	-.13	.02
	D	.04	.26	-.77	-.62	.07

Item	Choice	Key A	Key B	Key C	Key D	Key E
20	L	.64	-.82	.20	.67	-.14
	U	-.26	.25	.16	-.15	.09
	D	-.58	.80	-.33	-.68	.12
21	L	-.06	-.27	.76	.81	-.17
	U	.01	.01	.01	-.15	.07
	D	.05	.27	-.80	-.74	.12
22	L	.10	-.43	.61	.85	-.10
	U	-.01	.02	.09	-.14	.04
	D	-.09	.42	-.71	-.74	.05
23	L	-.06	-.03	.23	.10	.65
	U	-.07	-.01	.16	-.13	-.28
	D	.14	.04	-.39	-.23	-.47
24	L	.14	-.48	.54	.80	-.08
	U	-.02	-.03	.18	.02	-.01
	D	-.10	.45	-.62	-.73	.06
25	L	-.22	.38	.20	-.10	.20
	U	-.04	-.01	.16	.04	-.04
	D	.22	-.30	-.29	.05	-.03
26	L	.67	-.84	.22	.48	-.15
	U	-.39	.42	.05	-.11	.17
	D	-.59	.80	-.33	-.56	.08
27	L	.13	-.52	.69	.81	-.21
	U	-.04	.19	-.11	-.30	.13
	D	-.13	.48	-.73	-.72	.15
28	L	.01	-.35	.56	.82	-.07
	U	-.00	.00	.12	-.08	.08
	D	-.01	.34	-.65	-.74	.00
29	L	-.16	.07	.16	-.03	.59
	U	-.00	-.04	.18	.15	-.23
	D	.18	-.05	-.31	-.08	-.46
30	L	.07	-.38	.55	.81	-.13
	U	-.00	-.01	.10	-.07	.12
	D	-.07	.38	-.62	-.74	.03

Item	Choice	Key A	Key B	Key C	Key D	Key E
31	L	-.34	.49	.12	-.27	.30
	U	-.12	.05	.13	.02	.01
	D	.38	-.45	-.20	.22	-.27
32	L	.14	-.21	.18	.15	.53
	U	-.02	-.10	.30	.20	-.01
	D	-.08	.24	-.35	-.26	-.38
33	L	-.36	.19	.48	.25	-.18
	U	-.06	-.03	.31	.15	.03
	D	.28	-.09	-.54	-.27	-.13
34	L	.04	-.08	.25	.19	.24
	U	-.07	.06	-.11	-.10	-.19
	D	.03	.08	-.29	-.21	-.19
35	L	-.18	.06	.23	.14	.11
	U	.25	-.14	-.19	-.10	-.07
	D	.02	.08	-.17	-.11	-.12
36	L	-.13	.02	.24	.17	.17
	U	.07	-.01	-.13	-.10	-.11
	D	.22	-.03	-.35	-.20	-.22
37	L	-.22	.26	.19	-.12	.4
	U	.03	-.10	.08	.12	-.15
	D	.24	-.21	-.32	.01	-.37
38	L	-.13	-.06	.52	.35	.12
	U	-.06	.05	.05	.03	-.04
	D	.19	.02	.55	-.31	-.07
39	L	.17	-.19	.33	.22	.19
	U	-.14	.06	.10	.08	-.08
	D	-.05	.16	-.51	-.34	-.18
40	L	.08	.00	-.07	-.07	.06
	U	-.01	-.04	.14	.12	-.04
	D	-.06	.07	-.09	-.07	-.01
41	L	.01	-.17	.26	.25	.06
	U	.06	-.12	.13	.10	-.08
	D	-.05	.18	-.22	-.19	.04

Item	Choice	Key A	Key B	Key C	Key D	Key E
42	L	-.01	-.14	.32	.26	.07
	U	-.01	-.09	.23	.15	.02
	D	.03	.15	-.36	-.26	-.06
43	L	-.14	.22	.19	-.08	.50
	U	-.12	.00	.31	.12	-.01
	D	.20	-.15	-.40	-.04	-.36
44	L	-.01	-.09	.30	.17	.26
	U	-.03	.03	-.02	-.01	-.19
	D	.04	.10	-.40	-.22	-.19
45	L	-.38	.24	.48	.17	-.09
	U	.07	-.10	.05	.06	.01
	D	.36	-.18	-.56	-.23	-.10
46	L	-.15	.09	.32	.20	-.16
	U	-.03	-.07	.18	.12	.00
	D	.16	-.03	-.41	-.26	.14
47	L	-.12	.06	.36	.14	.56
	U	-.03	-.07	.28	.16	-.04
	D	.12	.01	-.52	-.24	-.40
48	L	-.28	.16	.34	.03	.53
	U	-.09	.02	.25	.07	.01
	D	.28	-.14	-.47	-.08	-.41
49	L	-.07	.12	.23	-.06	.62
	U	-.09	-.01	.28	.11	-.03
	D	.13	-.10	-.42	-.04	-.54
50	L	-.22	.30	.30	-.10	.40
	U	-.15	.06	.27	.11	.11
	D	.28	-.25	-.41	-.02	-.35
51	L	-.11	-.12	.58	.49	-.00
	U	.01	-.07	.17	.11	-.02
	D	.10	.16	-.63	-.51	.03
52	L	.39	-.37	.16	.11	-.02
	U	-.18	.10	.12	.08	.03
	D	-.36	.39	-.30	-.21	.03

Item	Choice	Key A	Key B	Key C	Key D	Key E
53	L	.53	-.56	.16	.36	-.18
	U	-.10	-.02	.15	.11	.07
	D	-.46	.57	-.23	-.41	.15
54	L	.50	-.63	.26	.43	-.07
	U	-.05	.01	.17	.04	-.01
	D	-.49	.66	-.40	-.48	.09
55	L	-.21	.11	.29	.09	.66
	U	.02	-.01	.13	.08	-.32
	D	.24	-.11	-.46	-.18	-.44
56	L	.01	-.28	.61	.53	-.10
	U	-.01	.02	.09	-.01	.00
	D	-.00	.27	-.70	-.54	.10
57	L	.54	-.43	.10	.06	-.22
	U	-.33	.24	.15	.11	.11
	D	-.46	.40	.26	-.15	.23
58	L	.19	-.36	.52	.40	-.28
	U	-.08	.10	.00	-.02	.10
	D	-.17	.35	.62	-.47	.26
59	L	-.27	.35	.19	-.15	.55
	U	-.09	-.14	.11	.13	-.13
	D	.21	-.24	-.29	.04	-.44
60	L	.02	-.18	.51	.40	-.16
	U	-.02	-.02	.12	-.02	-.01
	D	-.00	.18	-.58	-.36	.15
61	L	.35	-.29	.01	.06	.50
	U	-.10	-.00	.22	.09	.03
	D	-.26	.28	-.17	-.13	-.51
62	L	.40	-.51	.35	.47	-.32
	U	-.17	.11	.07	-.03	.16
	D	-.30	.46	-.43	-.49	.22
63	L	.39	-.56	.43	.58	-.27
	U	-.11	.07	.10	-.01	.07
	D	-.33	.55	-.54	-.62	.23

Item	Choice	Key A	Key B	Key C	Key D	Key E
64	L	.08	-.12	.17	.11	.74
	U	.03	-.12	.24	.17	.02
	D	-.09	.19	-.32	.21	-.57
65	L	-.28	.25	.10	-.07	.39
	U	.13	-.10	.02	-.01	-.18
	D	.23	-.22	-.14	.09	-.33
66	L	.09	-.46	.75	.84	-.12
	U	.03	.01	-.01	-.14	-.01
	D	-.11	.46	-.76	-.75	.13
67	L	-.53	.67	.07	-.39	.32
	U	.11	.24	.27	.23	-.08
	D	.45	-.48	-.30	.21	-.26
68	L	-.65	.83	-.04	-.53	.20
	U	.07	-.21	.14	.15	.02
	D	.62	-.71	-.06	.45	-.22
69	L	.57	-.54	.14	.23	-.24
	U	-.20	.11	.23	.04	.11
	D	-.46	.51	-.33	-.28	.17
70	L	-.31	.35	.16	-.13	.11
	U	.06	-.17	.10	.10	-.01
	D	.30	-.26	-.25	.07	-.12
71	L	.39	-.64	.22	.60	-.03
	U	-.17	.22	.16	-.10	.00
	D	-.33	.58	-.38	-.62	.03
72	L	.36	-.60	.47	.66	-.15
	U	.12	.17	.01	.15	.06
	D	-.31	.57	-.57	-.64	.12
73	L	-.62	.80	-.05	-.51	.20
	U	.06	-.19	.17	.17	.05
	D	.61	-.71	-.06	.43	-.25
74	L	-.01	-.06	.32	.25	-.35
	U	-.02	-.01	.06	.01	.03
	D	.03	.07	-.38	-.26	.34

Item	Choice	Key A	Key B	Key C	Key D	Key E
75	L	-.74	.86	.11	-.43	.14
	U	-.11	-.03	.23	.14	-.02
	D	.69	-.70	-.25	.26	-.11
76	L	-.31	.23	.24	.01	.68
	U	-.00	-.07	.20	.14	-.15
	D	.34	-.19	-.43	-.12	-.58
77	L	.70	-.63	.06	.19	-.35
	U	-.31	.21	.17	-.01	.20
	D	-.59	.58	-.19	-.21	.25
78	L	.40	-.49	.38	.39	-.31
	U	.02	-.10	.09	.10	.03
	D	-.39	.54	-.44	-.45	.26
79	1	-.23	-.00	.38	.34	.08
	2	.29	-.01	-.30	-.27	-.02
80	1	.00	-.19	.21	.55	.23
	2	.06	.18	-.14	-.47	-.14
81	1	-.45	.30	.17	.06	.11
	2	.50	-.30	-.11	-.02	-.03
82	1	-.88	.94	.05	-.35	.39
	2	.94	-.92	.02	.40	-.31
83	1	.64	-.64	-.21	.21	.30
	2	-.61	.65	.27	-.17	-.24
84	1	.53	.67	-.04	-.44	.55
	2	.59	.66	.13	.50	-.44
85	1	-.64	.52	.08	-.11	.64
	2	.70	-.52	-.02	.15	-.54
86	1	-.7	.18	.32	.07	-.51
	2	.16	-.21	-.22	.01	.61
87	1	-.16	-.00	.37	.42	-.12
	2	.21	.01	-.30	-.37	.18

Item	Choice	Key A	Key B	Key C	Key D	Key E
88	1	-.42	.34	.29	.08	.03
	2	.45	-.33	-.21	-.04	.02
89	1	.83	-.99	.10	.61	-.14
	2	-.82	1.02	-.06	-.59	.17
90	1	.72	-.46	-.33	-.18	-.21
	2	-.66	.43	.39	.24	.21
91	1	-.66	.95	-.28	-.72	.31
	2	.67	-.89	.33	.74	-.25
92	1	-.48	.35	.28	.21	-.03
	2	.56	-.37	-.22	-.15	.11
93	1	-.37	.20	.36	.22	-.07
	2	.40	-.17	-.31	-.19	.11
94	1	-.63	.54	.19	.02	.29
	2	.71	-.55	-.11	.06	-.24
95	1	.63	-.52	-.16	.01	-.18
	2	-.55	.50	.23	.07	.22
96	1	.18	-.12	.13	.18	.12
	2	-.14	.14	-.07	-.15	-.08
97	1	-.72	.82	.06	-.26	.44
	2	.78	-.81	-.03	.27	-.39
98	1	-.81	1.04	-.14	-.66	.21
	2	.82	-.97	.18	.68	-.17
99	1	-.90	.84	.21	-.10	.27
	2	.93	-.81	-.17	.13	-.23
100	1	-.81	1.06	-.21	-.67	.27
	2	.83	-1.02	.27	.70	-.23

APPENDIX F

PERCENTILE RANK OF SCORES ON THE AGRICULTURAL OCCUPATIONS INTEREST SCALE FOR MEN BASED ON FINAL KEYS

Percentile	*Key A	Key B	Key C	Key D	Key E
100	137	198	89	174	101
99	131	159	85	132	96
98	130	154	82	129	88
97	129	152		128	
96	128	150	80	124	87
95	127	149		123	86
94	126	145		121	
93	125	144		120	85
92		143	79	119	
91		142			84
90	124	140	78	118	
89	123	138		117	83
88	122	134		115	82
87	121	129		114	
86		126		113	81
85		124		112	
84		123			80
83	120	121	77		
82		119		111	79
81		118	76	110	
80	119	115		109	78
79	118	113	75	108	
78		112		107	77
77		111			
76	117	110	74		
75		109		106	76
74		108			
73	116	106	73	105	
72		105			
71	115	103		104	75
70		102	72	103	

*Key

A Scores based on the key for production agriculture
B Scores based on the key for ornamental horticulture
C Scores based on the key for agricultural business
D Scores based on the key for agricultural mechanization
E Scores based on the key for conservation

Percentile	Key A	Key B	Key C	Key D	Key E
69	114	101			
68		100		102	74
67		99	71		
66	113				
65		98		101	
64		97		100	73
63	112	96	70		
62		95		99	
61		94			
60	111	93		98	72
59		92			
58	110	91	69	97	
57		90		96	71
56		89			
55	109			95	
54	108		68	94	
53		88		93	
52		87		92	
51	107	86	67		70
50	106	85	66	91	69
49		84			
48	104	83	65		
47		82		90	68
46	103	81			
45				89	
44	102	80	64		
43	101			88	67
42		79	63	87	
41					
40		78		86	
39	100				66
38		77	62		
37		76		85	
36	98		61	84	
35		75			
34	97			83	65
33	96	74	60		
32	95				
31		73		82	64
30	94				
29			59	81	
28	93			80	63

Percentile	Key A	Key B	Key C	Key D	Key E
27	92	72			
26	91				
25	90		58	79	
24		70			62
23	89		57	78	
22	88			77	
21		69			
20	87		56	76	61
19				75	
18		68			
17	86	67	55	74	
16	85		54	73	60
15	84	66		72	
14				71	59
13	83	65	53		
12	82	64		70	
11			52		58
10	81	63	51	69	
9	80			66	57
8	79	62			56
7	78	61	50	65	
6		60		64	55
5	76		49	62	54
4	75		48	61	53
3	73	59	44	56	51
2	72		41	53	49
1	70				

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4. SOURCE: Cornell University, Ithaca, New York 14850

5. TITLE: Development of A Scale to Measure Interests in Agricultural Occupations

6. AUTHOR(S): Hamilton, William H. and Hill, Charles W.

7. DATE: 2/67 | 8. PAGINATION: 72 | 9. REFERENCES: 12

10. REPORT/SERIES NO.: OEG-1-6-08304-0814

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12. PUBLICATION TITLE: Development of A Scale to Measure Interest in Agricultural Occupations

13. EDITOR(S): N. A.

14. PUBLISHER: N. A.

15. ABSTRACT *(250 words max.)*

The study was concerned with the development of a scale to measure agricultural interests. The three major objectives were to: 1. Develop interest items to discriminate between the five agricultural occupations fields of; production agriculture, ornamental horticulture, agricultural business, agricultural mechanization, and conservation. 2. Test these items with successful people in these occupational fields to determine the successfully discriminating items. 3. To identify and compile in the form of a scale the most successful items and to develop scoring keys for each field.

Interviewers collected schedules in twenty-five sampling areas of New York State. These areas were chosen by use of a table of random numbers after stratification on the basis of economic areas.

A computer program was identified and utilized in the analysis of data. The program provided summary statistics for the whole instrument as well as for each item of the instrument. These statistical summaries were used to identify the most successfully discriminating items. The 100 most useful items were identified and compiled into the Agricultural Occupations Interest Scale. Sub-scale scoring keys were developed for each of the individual occupations fields.

Each of the 762 individuals' responses were scored on the basis of the 100 final items and final keys. The resulting scores were converted to percentile ranks. The highest percentile rank was projected as the individuals occupational field. Seventy-one percent of the men (N=652) and 53 percent of the women (N=110) were correctly predicted.

Recommendations for use with youth in guidance, for the development of norms for boys and girls, for the study of additional items to improve discrimination in the agricultural business and conservation fields were made.

16. RETRIEVAL TERMS *(Continue on reverse)*

Interests	Interest Scale, Interest Inventory Occupational Interests Agricultural Interests Interest Test Measuring Interests in Agricultural Production and Management and in Agricultural Business	Interests Guidance	in agricultural mechanization in conservation in conservation, forestry and recreational facilities in agricultural occupations Career selection Career training selections Interest measurement

17. IDENTIFIERS: N. A.

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Field 8. Pagination: Enter total number of pages of document, including illustrations, appendices, etc. (Example: 115 p.)

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16. RETRIEVAL TERMS (Continued)

Guidance	Occupations	Careers	Career choice
	Occupational information		Career guidance
	Course selection		Career interest
Occupations	Interest in occupations		Choosing an occupation
	Interest measurement in occupations		
	Occupational interest measurement		
	Agricultural occupations interest		
	Agricultural occupation interest	measurement	

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